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ANTONELLI, TERRY, STOUT & KRAUS, LLP
1300 NORTH SEVENTEENTH STREET
SUITE 1800
ARLINGTON, VA 22209-9889

EXAMINER

MAHMOUDI, HASSAN

ART UNIT	PAPER NUMBER
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2175

DATE MAILED: 07/15/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

8

Office Action Summary

Application No.

09/739,790

Applicant(s)

SUGINOSHITA ET AL.

Examiner

Tony Mahmoudi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DOV POPOVICI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

DETAILED ACTION

Remarks

1. In response to communications filed on 06-May-2003, claims 1-11 are amended per applicant's request. Claims 1-11 are presently pending in the application.

Claim Objections

2. Claim 3 is objected to because of the following informalities:

In claim 3, line 6, "based on toward a" should be changed to --based on a--. Correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2 and 4-6, and 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kodama (U.S. Patent No. 6,374,262) in view of Nakai et al (U. S. Patent No. 5,954,803.)

As to claim 1, Kodama teaches a database system (see Abstract, and see column 3, lines 16-17) comprising:

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a master database to be updated (see column 5, lines 15-22);
a replica for storing a duplicate of the master database (see column 5, lines 35-40);
an allocation unit for reading the update data and selectively extracting the update data according to the preferential order information (see Abstract, and see column 2, lines 51-54, where “selective extraction” is read on “extracting a record with a later update”); and
a management unit for updating the replica with the extracted update data (see column 2, lines 63-66, where “updating the replica” is read on “transferring to the replica machine”).

Kodama does not teach:

a preferential order information memory unit for holding preferential order information indicating a preferred order of updating a specific database or a part thereof of update data of the master database on the replica.

Nakai et al teaches a memory-to-memory data transfer system (see Abstract), in which he teaches a preferential order information memory unit for holding preferential order information (see column 5, lines 41-43) indicating a preferred order of updating a specific database or a part thereof of update data of the master database on the replica (see column 5, lines 43-46.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kodama to include a preferential order information memory unit for holding preferential order information indicating a preferred order of updating a specific database or a part thereof of update data of the master database on the replica.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kodama by the teaching of Nakai et al, because a preferential order information memory unit for holding preferential order information indicating

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a preferred order of updating a specific database or a part thereof of update data of the master database on the replica, would enable the system to assign preferences and order to the data being updated and be able to update the data (or portions of data) between databases selectively, based on the desired order of preference.

As to claim 2, Kodama teaches a database system (see Abstract, and see column 3, lines 16-17) comprising:

a master database to be updated (see column 5, lines 15-22);

a replica for storing a duplicate of the master database (see column 5, lines 35-40);

an allocation unit for reading the update data and selectively extracting the update data according to the preferential order information (see Abstract, and see column 2, lines 51-54, where “selective extraction” is read on “extracting a record with a later update”); and

a management unit for updating the replica with the extracted update data (see column 2, lines 63-66, where “updating the replica” is read on “transferring to the replica machine”).

Kodama does not teach:

a preferential order acquiring unit for receiving preferential order information indicating a preferred order of updating a specific database or a part thereof to be applied when update data of the master database is reflected on the replica and for acquiring the preferential order information.

Nakai et al teaches a memory-to-memory data transfer system (see Abstract), in which he teaches a preferential order acquiring unit for receiving preferential order information (see column 7, line 64 through column 8, line 3, and see column 22, lines 16-60) indicating a

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preferred order of updating a specific database or a part thereof to be applied when update data of the master database is reflected on the replica and for acquiring the preferential order information (see column 5, lines 43-46.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kodama to include a preferential order acquiring unit for receiving preferential order information indicating a preferred order of updating a specific database or a part thereof to be applied when update data of the master database is reflected on the replica and for acquiring the preferential order information.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kodama by the teaching of Nakai et al, because a preferential order acquiring unit for receiving preferential order information indicating a preferred order of updating a specific database or a part thereof to be applied when update data of the master database is reflected on the replica and for acquiring the preferential order information, would enable the system to store assigned preferences and be able to prioritize the data being updated and be able to update the data (or portions of data) between databases selectively, based on the desired order of preference.

As to claim 4, Kodama teaches a database system (see Abstract, and see column 3, lines 16-17) comprising:

a master database to be updated (see column 5, lines 15-22);

a replica for storing a duplicate of the master database (see column 5, lines 35-40);

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a first control unit, provided in the master database side, for selectively extracting update data (see Abstract, and see column 2, lines 51-54, where “selective extraction” is read on “extracting a record with a later update”) and for transferring the update data to a communication means (see figure 1, and see column 3, lines 59-67); and

a second control unit, provided in the replica side, for receiving the update data transferred from the communication means, for extracting from the update data according to stored preferential order information of further subdivided data type to be updated, and for updating the replica based on the extracted update data (see column 7, lines 53-65.)

Kodama does not teach stored preferential order information indicating a preferred order of updating specific data types of the update data to be updated.

Nakai et al teaches a memory-to-memory data transfer system (see Abstract), in which he teaches stored preferential order information (see column 5, lines 41-43) indicating a preferred order of updating specific data types of the update data to be updated (see column 5, lines 43-46.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kodama to include stored preferential order information indicating a preferred order of updating specific data types of the update data to be updated.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kodama by the teaching of Nakai et al, because stored preferential order information indicating a preferred order of updating specific data types of the update data to be updated, would enable the system to assign preferences and order to the data

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being updated and be able to update the data (or portions of data) between databases selectively, based on the desired order of preference.

As to claim 5, Kodama teaches a database system (see Abstract, and see column 3, lines 16-17) comprising:

- a master database to be updated (see column 5, lines 15-22);

- a replica for storing a duplicate of the master database (see column 5, lines 35-40);

- a first control unit, provided in the master database, for transferring update data (see column 2, line 41 through column 3, line 5) to a communication means (see figure 1, and see column 3, lines 59-67); and

- a second control unit, provided in the replica side, for receiving the update data transferred from the communication means, selectively extracting from the update data (see Abstract, and see column 2, lines 51-54, where “selective extraction” is read on “extracting a record with a later update”), and for updating the replica based on the extracted update data (see column 2, lines 63-66, where “updating the replica” is read on “transferring to the replica machine”).

Kodama does not teach stored preferential order information indicating a preferred order of updating specific data types of the update data to be updated.

Nakai et al teaches a memory-to-memory data transfer system (see Abstract), in which he teaches stored preferential order information (see column 5, lines 41-43) indicating a preferred order of updating specific data types of the update data to be updated (see column 5, lines 43-46.)

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Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kodama to include stored preferential order information indicating a preferred order of updating specific data types of the update data to be updated.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kodama by the teaching of Nakai et al, because stored preferential order information indicating a preferred order of updating specific data types of the update data to be updated, would enable the system to assign preferences and order to the data being updated and be able to update the data (or portions of data) between databases selectively, based on the desired order of preference.

As to claim 6, Kodama teaches a database system (see Abstract, and see column 3, lines 16-17) comprising:

- a master database to be updated (see column 5, lines 15-22);

- a plurality of replicas for storing a duplicate of the master database (see figure 2, and see column 4, lines 53-58);

- a first control unit, provided in the master database side, for selectively transferring update data (see column 2, line 41 through column 3, line 5); and

- a second control unit, provided in the replica side, for receiving the update data transferred, for selectively extracting from the update data (see Abstract, and see column 2, lines 51-54, where "selective extraction" is read on "extracting a record with a later update"), and for

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updating the replica based on the extracted update data (see column 2, lines 63-66, where “updating the replica” is read on “transferring to the replica machine”).

Kodama does not teach stored preferential order information indicating a preferred order of updating specific data types of the update data to be updated.

Nakai et al teaches a memory-to-memory data transfer system (see Abstract), in which he teaches stored preferential order information (see column 5, lines 41-43) indicating a preferred order of updating specific data types of the update data to be updated (see column 5, lines 43-46.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kodama to include stored preferential order information indicating a preferred order of updating specific data types of the update data to be updated.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kodama by the teaching of Nakai et al, because stored preferential order information indicating a preferred order of updating specific data types of the update data to be updated, would enable the system to assign preferences and order to the data being updated and be able to update the data (or portions of data) between databases selectively, based on the desired order of preference.

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As to claim 8, Kodama teaches a method (see Abstract) for forming a replica of a database in a system having a master database to be updated and a replica thereof (see column 4, lines 53-58), the method comprising steps of:

reading the update data (see column 2, line 41 through column 3, line 5);

extracting the update data selectively (see Abstract, and see column 2, lines 51-54, where “selective extraction” is read on “extracting a record with a later update”);

updating the replica with the extracted update data (see column 10, lines 18-29.)

Kodama does not teach holding preferential order information indicating a preferred order of updating of specific data types that are to be applied when update data of the master database is reflected on the replica.

Nakai et al teaches a memory-to-memory data transfer system (see Abstract), in which he teaches holding preferential order information (see column 5, lines 41-43) indicating a preferred order of updating of specific data types that are to be applied when update data of the master database is reflected on the replica (see column 5, lines 43-46.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kodama to include holding preferential order information indicating a preferred order of updating of specific data types that are to be applied when update data of the master database is reflected on the replica.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kodama by the teaching of Nakai et al, because holding preferential order information indicating a preferred order of updating of specific data types that are to be applied when update data of the master database is reflected on the replica, would

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enable the system to assign preferences and order to the data being updated and be able to update the data (or portions of data) between databases selectively, based on the desired order of preference.

As to claim 9, Kodama teaches a method (see Abstract) for forming a replica of a database in a system having a master database to be updated and a replica thereof (see column 4, lines 53-58), the method comprising steps of:

extracting update data selectively (see Abstract, and see column 2, lines 51-54, where “selective extraction” is read on “extracting a record with a later update”);

transferring the extracted update data to a communication means (see column 2, line 41 through column 3, line 5);

receiving the update data transferred from the communication means on the replica side (see column 7, lines 29-52); and

updating the replica thereby (see column 10, lines 18-29); and

extracting update data selectively of further subdivided data types to be updates (see Abstract, and see column 2, lines 51-54, where “selective extraction” is read on “extracting a record with a later update”.)

Kodama does not teach stored preferential order information indicating a preferred order of updating specific data types of the update data to be updated.

Nakai et al teaches a memory-to-memory data transfer system (see Abstract), in which he teaches stored preferential order information (see column 5, lines 41-43) indicating a preferred

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order of updating specific data types of the update data to be updated (see column 5, lines 43-46.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kodama to include stored preferential order information indicating a preferred order of updating specific data types of the update data to be updated.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kodama by the teaching of Nakai et al, because stored preferential order information indicating a preferred order of updating specific data types of the update data to be updated, would enable the system to assign preferences and order to the data being updated and be able to update the data (or portions of data) between databases selectively, based on the desired order of preference.

As to claim 10, Kodama teaches a method (see Abstract) for forming a replica of a database in a system having a master database to be updated and a replica thereof (see column 4, lines 53-58), the method comprising steps of:

storing a data type of updated data of the master database that is to be reflected preferentially (see column 2, line 41 through column 3, line 5.)

reading the update data (see column 2, line 41 through column 3, line 5);

extracting the update data corresponding to the data type selectively (see Abstract, and see column 2, lines 51-54, where "selective extraction" is read on "extracting a record with a later update");

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updating the replica with the extracted update data (see column 10, lines 18-29.)

Kodama does not teach a preferred order.

Nakai et al teaches a memory-to-memory data transfer system (see Abstract), in which he teaches a preferred order (see column 5, lines 41-43.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kodama to include a preferred order.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kodama by the teaching of Nakai et al, because a preferred order, would enable the system to assign preferences and order to the data being updated and be able to update the data (or portions of data) between databases selectively, based on the desired order of preference.

As to claim 11, Kodama teaches a computer-readable recording medium (see column 15, line 13) having a recorded program for forming a replica of a master database to be updated (see column 4, lines 53-58), the program comprising (the applicant is kindly directed to remarks and discussions made in claim 8 above.)

5. Claims 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kodama (U.S. Patent No. 6,374,262) in view of Nakai et al (U.S. Patent No. 5,954,803), and further in view of Kawagoe (U.S. Patent No. 6,438,563.)

As to claim 3, Kodama teaches a database system (see Abstract, and see column 3, lines 16-17) comprising:

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a master database to be updated (see column 5, lines 15-22);
a replica for storing a duplicate of the master database (see column 5, lines 35-40);
an updating unit for receiving update data of the master database and updating the replica (see column 3, line 59 through column 4, line 6) corresponding to the use history (see column 10, lines 19-29, where “specified data type” is read on “negotiation-rated information table exclusive of synchronization information”).)

Kodama does not teach: updating with preference based on a preferred order of updating of a specified data type.

Nakai et al teaches a memory-to-memory data transfer system (see Abstract), in which he teaches updating with preference based on a preferred order of updating of a specified data type (see column 5, lines 43-46.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kodama to include updating with preference based on a preferred order of updating of a specified data type.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kodama by the teaching of Nakai et al, because updating with preference based on a preferred order of updating of a specified data type, would enable the system to update the data (or portions of data) between databases selectively, based on the desired order of preference.

Kodama as modified still does not teach a history acquiring unit for recording use history of the replica.

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Kawagoe teaches a method for synchronizing databases (see Abstract), in which he teaches a history acquiring unit for recording use history of the replica (see column 3, line 59 through column 4, line 24.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kodama as modified to include a history acquiring unit for recording use history of the replica.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kodama as modified, by the teaching of Kawagoe because, a history acquiring unit for recording use history of the replica, would enable the replication system to log all replication information and provide the users with usage log, replicated data type log, and event log, corresponding to the activities of the replicated database.

As to claim 7, Kodama teaches a database system (see Abstract, and see column 3, lines 16-17) comprising:

a master database for storing a plurality of types of data (see figure 2, and see column 4, lines 53-58);

a master database management unit for updating the master database in order of occurrence of an update request according to the data update request to the master database (see column 7, lines 53-65);

an update log file for storing update log of the master database in the order of updating of the master database (see column 12, lines 60-67);

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a data allocation unit for extracting update data (see Abstract, and see column 2, lines 51-54, where “selective extraction” is read on “extracting a record with a later update”);

a replica for storing the duplicate of data stored in the master database (figure 2); and

a replica database management unit for writing the update data extracted by means of the data allocation unit in the replica in the order of extraction (see column 5, lines 35-40.)

Kodama does not teach: preferential order information indicating a preferred order of updating of specific types of the update data in the update log read by the update log reading unit.

Nakai et al teaches a memory-to-memory data transfer system (see Abstract), in which he teaches preferential order information (see column 5, lines 41-43) indicating a preferred order of updating a specific types of the update data in the update log read by the update log reading unit (see column 5, lines 43-46.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kodama to include preferential order information indicating a preferred order of updating of specific types of the update data in the update log read by the update log reading unit.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kodama by the teaching of Nakai et al, because preferential order information indicating a preferred order of updating of specific types of the update data in the update log read by the update log reading unit, would enable the system to assign preferences and order to the data being updated and be able to update the data (or portions of data) between databases selectively, based on the desired order of preference.

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Kodama as modified still does not teach an update log reading unit for reading out the update log from the log file.

Kawagoe teaches a method for synchronizing databases (see Abstract), in which he teaches a an update log reading unit for reading out the update log from the log file (see column 10, lines 20-31, and see column 20, lines 19-23.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kodama as modified to include an update log reading unit for reading out the update log from the log file.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Kodama as modified, by the teaching of Kawagoe because, an update log reading unit for reading out the update log from the log file, would enable the replication system to access all replication information and provide the users with usage log, replicated data type log, and event log, corresponding to the activities of the replicated database.

Response to Arguments

6. Applicant's arguments filed on 06-May-2003 with respect to claims 1-11 have been fully considered but they are moot in view of the new grounds for rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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The following patents are cited to further show the state of art with respect to database selective replication and database synchronization in general:


Patent No.	Issued to	Cited for teaching
US 6,396,963	Shaffer et al.	Updating databases with preferential orders.
US 5,987,234	Hirosawa et al.	Preferential orders in updating databases.
US 4,769,636	Iwami et al.	Displaying data using preferential orders.

8. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Tony Mahmoudi whose telephone number is (703) 305-4887. The examiner can normally be reached on Mondays-Fridays from 08:00 am to 04:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici, can be reached at (703) 305-3830.

tm

July 01, 2003



DOV POPOVICI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100